

IN THE CLAIMS

1. (Currently amended) A method of performing an IDDQ test of an electronic circuit, the method comprising using a power supply unit to supply power supply current to the electronic circuit; adjusting an output impedance of the power supply unit to a value selected for the electronic circuit, the value having been selected so that a resonance circuit that comprises a connection between the power supply unit and the electronic circuit is substantially critically dampened; measuring IDDQ current with a current sensing element that senses a value of the current supplied to the electronic circuit; and locating the current sensing element between an external power supply source and the power supply regulating circuit that supplies power to the electronic circuit under test, outside a part of the power supply unit that affects the output impedance.

2. (Currently amended) A method according to claim 1, wherein said power supply unit contains a regulating loop, for regulating a supply voltage applied to the electronic circuit at least during measurement of the IDDQ current, said measuring being performed on an incoming supply current that the power supply unit draws to provide the regulated voltage to the electronic circuit.

3. (Currently amended) A method according to claim 2, wherein a further incoming supply current is supplied to the power supply unit ~~in parallel~~ along with said incoming supply current, the method comprising regulating the further incoming supply current to a level equal to a consumed current that is consumed by the power supply unit.

4-9. (Canceled)